



## CONTENTS

News.....	1-6	Overseas Offices .....	7
Greetings.....	8		

## News

### Yoshinori CHAYAMA of the Iaido Club Wins the All Japan Student Iaido Tournament

On November 23, 2014, the 29th All Japan Student Iaido Tournament was held at the Fukakusa Campus Gymnasium of Ryukoku University, where Yoshinori Chayama (third year, Faculty of Science and Engineering) won the title in the individual event.

Comment from William Brier, manager of the Iaido Club:

“I’m very pleased to announce that our team captain, Yoshinori Chayama, won the student Iaido championship in the individual event. I’d like to take this opportunity to thank all the related people for their continued support, including all those at Doshisha University’s Department of Students Sports Support for providing a superlative training environment.

Chayama has dedicated himself to hard training days and nights, while, as a captain, bringing together the club member and boosting the team’s morale. I feel his committed and self-reflective attitude helped to earn him the victory.

I hope our club’s second consecutive championship win will help to motivate and inspire Doshisha’s sports teams, which are becoming more active and motivated as we head toward the 2020 Tokyo Olympics.”

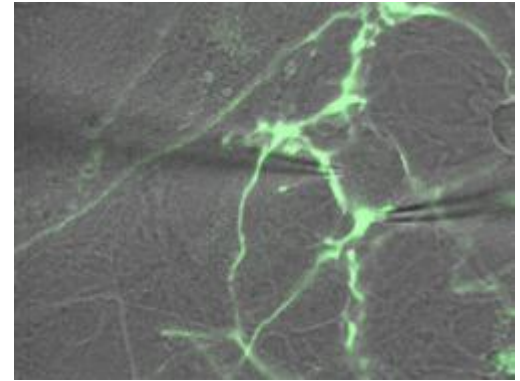
William Brier  
Manager of the Iaido Club



## Research Finding of Two Doshisha Professors Published in Neuron

A research article by Associate Professor Shinya Kawaguchi (Organization for Advanced Research and Education) and Professor Takeshi Sakaba (Graduate School of Brain Science) was published in the *Neuron* online journal on February 26, 2015.

In the research, the two professors succeeded in direct patch-clamp recording from the axon and terminal of a cultured cerebellar Purkinje cell (1-2  $\mu\text{m}$  in diameter), and identified the mechanism in which action potential amplitudes are attenuated around axon terminals depending on action potential frequency, resulting in plastic changes in synaptic transmission. The finding, which demonstrates that the axon does not always transmit neural information as faithfully as had been thought, but rather positively modulates and transmits the information, is considered to provide new insight into activation patterns of neural networks.



Recording simultaneously from the front and rear part of a synapse

Title of the Article:

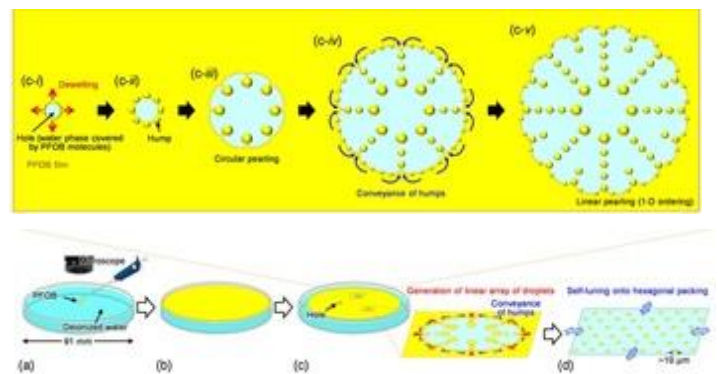
‘Control of inhibitory synaptic outputs by low excitability of axon terminals revealed by direct recording’

Authors:

Shinya Kawaguchi and Takeshi Sakaba (2015)

## Assistant Professor Daigo Yamamoto, Professor Akihisa Shioi, and Professor Kenichi Yoshikawa have discovered a new spatio-temporal pattern of fluorocarbon droplets

The design of dynamically self-assembled systems is of high interest in science and technology. Here, we report a unique cascade in the self-ordering of droplets accompanied by a dewetting transition. The dynamic self-emergent droplets are observed when a thin liquid layer of an immiscible fluorocarbon oil (perfluorooctyl bromide, PFOB) is placed on a water surface (Fig. 1a, b). As the PFOB gradually evaporates, the system exhibits characteristic pearling phenomena consisting of four successive non-equilibrium events; event I: (c-i) A water hole is generated through the evaporation of PFOB molecules and the dewetting transition; event II: (c-ii) Fluorocarbon humps are formed on the rim of the water holes, which causes circular pearling of the droplet array; event III: (c-iii→v) Appearance of linear pearling (1D array), where droplets are generated periodically; event IV: (d) A regular hexagonal 2D structure is formed over the entire water surface accompanied by rhythmical shrinking and expanding motion, and remains for a relatively long time as a stable pattern. Finally, the arranged droplets disappear within 20 s due to evaporation. This simple synthetic system, exhibiting unique spatio-temporal structure, appears to mimic collective behaviours found in nature and may serve as a model for the study of dynamically assembled systems.



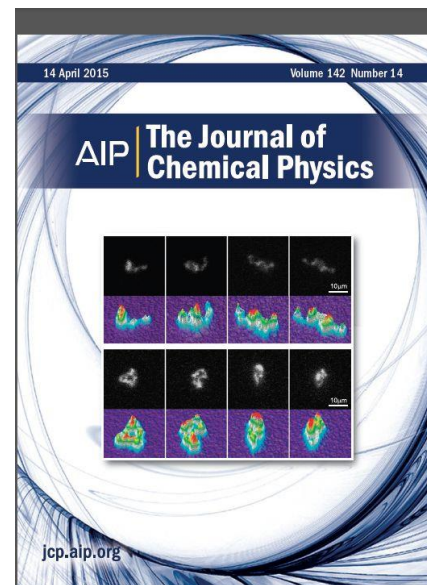
Nature. Communication. Home Page

<http://www.nature.com/ncomms/2015/150522/ncomms8189/full/ncomms8189.html>

## Article of Prof. Kenmotsu, Prof. Yoshikawa (Faculty of Life and Medical Sciences) and Others Published in The Journal of Chemical Physics

An article written by Professor Takahiro Kenmotsu, Professor Kenichi Yoshikawa (Faculty of Life and Medical Sciences) and others was selected as Featured Article in The Journal of Chemical Physics, while the article's image of 'the fluctuation of a single genomic DNA molecule' was featured prominently on the journal's front page.

Genomic DNA in a cell is a very long chain polymer (mm-cm-sized in total length), though the properties of a polymer when its chain length is increased remain largely unknown. In this research, they quantitatively measured the fluctuation of a genomic DNA using a single molecule measurement technology, and discovered that the relaxation time of a circular DNA is shorter than that of a linear chain by at least one order of magnitude. This tendency was reproduced by numerical simulations. The researchers clarified that this is one of the characteristics of a long-chain DNA by applying the scaling theory.



### Name of Journal

The Journal of Chemical Physics, Volume 142, Issue 14, 2015

### Title of the Article

'Marked difference in conformational fluctuation between giant DNA molecules in circular and linear forms'

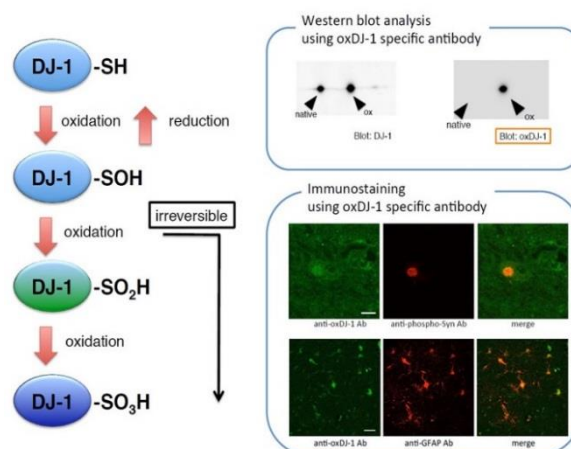
### Authors

Takafumi Iwaki, Tomomi Ishido, Ken Hirano, Alexei A. Lazutin, Valentina V. Vasilevskaya, Takahiro Kenmotsu and Kenichi Yoshikawa

## Associate Professor Yoshiro Saito (Faculty of Life and Medical Sciences) and Others Develop Oxidized-DJ-1-Specific Antibody

Associate Professor Yoshiro Saito (System Life Science Laboratory led by Professor Noriko Noguchi, Department of Medical Life Systems, Faculty of Life and Medical Sciences) and others developed an antibody for the detection of oxidized DJ-1. Merck EMD Millipore Corporation commercialized and started selling it as Anti-oxDJ-1 Antibody.

This antibody is a reagent for research use that specifically reacts with Parkinson's disease-related molecules, DJ-1 oxidation. It has been developed with the aid of the Michael J. Fox Foundation for Parkinson's Research.



### Description of the Figure:

This antibody specifically reacts with oxidized DJ-1 (Cysteine is oxidized as SO<sub>2</sub>H and SO<sub>3</sub>H). Oxidized DJ-1 can be detected through the Western blot analysis (upper right of the figure) or the immunostaining method using this antibody (lower right of the figure).

## Japan Education Fair in Turkey 2015 Held in Istanbul

On March 14, the Japan Education Fair in Turkey 2015 took place in the former office of the Consulate-General of Japan in Istanbul. The event was co-organized by Doshisha University and the Consulate-General of Japan in Istanbul.

As part of MEXT's Project for University Network for Internationalization (Global 30), the fair was targeted primarily at students who wish to study at graduate schools in Japan. A total of about 320 people visited the fair, including more than 200 local students, representatives from four universities (the University of Tokyo, Kyoto University, Keio University and Doshisha University), the Consulate-General of Japan and the news media.

At the beginning of the fair, a principal consular officer of the Consulate-General of Japan in Istanbul, Mr. Sasatani, gave an opening address to participants. Participating universities held special sessions to introduce their respective educational institutions and ongoing research projects, and also offered one-on-one consultations for interested students. Staff of the Consulate-General of Japan in Istanbul also talked about the scholarship program, which runs for two consecutive years. All the events were very well received, demonstrating a high interest in studying in Japan.

The fair has been held for three consecutive years, and feedback from participating students in that time shows a gradual shift in attitude from vague feelings about studying in Japan to more concrete thoughts and firmer intentions more recently.

Due to the unstable situation of several countries close to Turkey, we were concerned about attracting enough visitors to the fair. However, attendance by both applicants and visitors was up on last year, indicating that the fair has gained real recognition among students in Turkey. We intend to continue with our efforts to attract competent and highly motivated students from all over the world.



## Saika Minegishi (Graduate School of Science and Engineering) Receives Best Poster Award at Asian Cyclodextrin Conference

At the 8th Asian Cyclodextrin Conference, held from May 14 to 16, 2015, Saika Minegishi (Major of Applied Chemistry, Graduate School of Science and Engineering) received the Gold Prize of the Nagai Poster Prize. Her poster presentation, as well as 10 minutes' oral presentation in English, was highly evaluated among competing entries from 47 students and adults, all under the age of 40. Minegishi's Gold Prize came after a comprehensive judgment on the quality of both research and presentation.

Minegishi developed a technique for investigating the biological role of carbon monoxide molecules which are constantly produced in a mouse's body by using a supramolecular complex of iron(II)porphyrin and cyclodextrin.



### Title of Presentation

'Removal of CO from the blood of mice by an iron( II )porphyrin/cyclodextrin supramolecular complex'

### Presenter

Saika Minegishi

A second-year Master's student (Major of Applied Chemistry), Functional Organic Chemistry Laboratory, Graduate School of Science and Engineering (graduated from the Department of Molecular Chemistry and Biochemistry, Faculty of Science and Engineering)

### Co-authors

Hiroaki Kitagishi (Associate Professor, Faculty of Science and Engineering)

Koji Kano (Professor Emeritus, Doshisha University)

## 2015 Spring Semester Foreign Language Honors Recognition Ceremony

On June 4, the 2015 Spring Semester Honors Recognition Ceremony in Foreign Language was held at Clarke Chapel. Established in 2006, the Foreign Language Honors Program honors high-achieving students in foreign languages with the aim of producing graduates with a high level of language proficiency, as well as international vision and perspective.

At the ceremony, presided over by Dean of Academic Affairs Yu Kamitani, President Koji Murata gave a congratulatory speech and presented a recognition certificate and a commemorative gift to each of the 36 honored students.



## Report: "Let's Kabuki ~ Kabuki for beginners ~" was held

On July 9th, "Kabuki Workshop" was held at Presentation Court in Learning Commons, supported by Office of International Students and Anesta Incorporation. The Kabuki actor Iemon from Miyabiya appeared on the stage along with the sound of wooden clippers and gave a greeting to the audience in Kabuki style called "Koujou". Learning Commons turned into Kabuki theatre. After explaining the historical background of Kabuki, Mr. Iemon demonstrated how to strike a "Mie" pose and how to make himself look feminine for a female role called "Onnagata". Subsequently, he showed how he put Kumadori, kabuki makeup, on himself at the backstage. According to his explanation, Kumadori stands for blood vessels. Red-colored Kumadori is for a hero who fights for justice, blue for enemy or evil characters and brown for a ghost, monster and ogre. The audience was amazed by the process of the makeup he showed right in front of them. When he asked "Does anyone want to try Kumadori on your face?", some of the audience raised their hand. An exchange student from Denmark was chosen for a model, and she was surprised at her own face after the makeup. She was a bit shy at first but readily took pictures with other students.

After a short break, Mr. Iemon performed a famous drama "Kagamizishi". Wearing a stunningly gorgeous costume and long wig, he danced passionately and moved around the stage. Every time he got close to the audience and the wig touched them, they got excited with a big cheer. After the show, they made a long line to take a commemorative photo with Mr. Iemon. Nowadays, Kabuki is seen as a prestigious traditional culture. Originally, however, Kabuki was a popular culture among the public, like a musical. Mr. Iemon introduced Kabuki as an approachable popular culture in a witty and friendly way so that the young generation could touch the world of Kabuki. It seemed that the participants enjoyed the performance to their hearts' content and found Kabuki appealing.



## Hazardous Preparedness Manual was published by JAPUC

The Japan Association of Private Universities and Colleges (JAPUC) issued HAZARD PREPAREDNESS MANUAL in Japanese and English. This manual is for those who support international students, and will be used as a standard in case of massive disasters. On the association's website, "Handbook for International Students" published by Doshisha University" is introduced as an example of manuals or guidelines made by its member universities.

For further details, please check the link below.

<http://ois.doshisha.ac.jp/en/news/2015/0202/news-detail-204.html>



# Overseas Offices

Doshisha University's overseas offices were established in order to further promote its rapid and effective internationalization. At our overseas offices, we are implementing mainly public relations activities to increase the profile of Doshisha University, while at the same time making the most of the characteristics unique to each office. In addition, we are undertaking various efforts to recruit overseas students, support our students while they are studying overseas, and provide on-site support to members of our faculties while they are overseas.

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## Message from Director of International Center

### The Road Less Travelled By

It was six years ago when I first assumed an administrative position at the International Center as a staff member—and I joined the team again this year. During these past six years, Doshisha has acquired two governmental grants to promote the internationalization of higher education. In order to accommodate increasing demand, the number of the office staff almost tripled, and, by the concerted effort with faculties and departments, the number of inbound students doubled and outbound students more than quadrupled. Now the International Center plays a core role in the globalization of Doshisha, giving study-abroad opportunities to both domestic and foreign students.



Studying abroad has occasionally been advocated mainly from a utilitarian point of view, such as improved language proficiency and better job opportunities. However, the true benefit of the study-abroad experience lies in the holistic development of youthful minds. Those students who have decided to go abroad are curious and brave enough to go out of the world of the known and comfortable, in which so many of their peers abide. Having them experience culture shocks, overcome difficulties and reflect on themselves, study-abroad experience broadens their perspective, promotes cultural understanding, nourishes moral responsibility, and thus equips them with the qualities to be global citizens. Let us help them choose, as Robert Frost once said, the road “less travelled by,” believing that it will make “all the differences” in their lives in the years to come.

Haruo Nishinoh  
Director  
The International Center  
Doshisha University

Warm greetings from Kyoto and we hope this message finds you in bright spirits.

Many traditional festivals are held in Kyoto during the summer, including an event called “Five Mountains Bonfire Festival,” in which five giant bonfires, each shaped distinctly, are lit on the mountains surrounding the city. We believe the spirits of our ancestors visit this world in the middle of August, and this festival signifies the moment when the spirits are returning to the spirit world as the smoke of the bonfires goes up to the sky. During this festive season, families often gather for reunions and visit their family graves.



There is plenty to experience and hope you have an opportunity to visit Kyoto some day during the summer traditional festivals.

Best wishes,  
Office of International Affairs

**Great Voyage** is published by the International Center at Doshisha University.

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